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ABSTRACT

Health administration students attending a college or university in Los Angeles, California, participated in a study of the effect of cooperative education. Three groups of students were selected. Group 1 consisted of undergraduate minority students--five males and five females (19-28 years old) with no prior health related work experience. Groups 2 and 3 were graduate students majoring in health services administration. Group 2 was comprised of 10 males and 5 females (22-46 years old). Group 3 consisted of 5 males and 10 females (21-48 years old). Groups 1 and 2 performed their cooperative experience in the first year of the study, Group 3 students in the following year. After administration of pretest questionnaires, students were placed in a health-related agency under the supervision of a professional health administrator for a minimum of 11 weeks. The posttest was the same questionnaire used for the pretest. A Likert-type attitude questionnaire measured students' feelings about themselves and about becoming health professionals. The semantic differential instrument assessed students' feelings toward five concepts: hospital, cooperative education experience, administrator, health career, and student's skill in administration. Data analysis indicated no significant change between pretest and posttest scores on the attitude questionnaire for any group. Group 3 showed a significant change in attitudes toward the skill of administration. (17 references) (YLB)

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COOPERATIVE EDUCATION:

TRAINING HEALTH MANAGERS

William N. Washington

INTRODUCTION

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Problem Statement

Training individuals to become competent health managers (administrators) in our society is essential if any improvements are to be made in the myriad of problems existing in our health delivery system. A variety of methods have been used to increase this possibility. One method employs combining academic study with a practical on the job experience.

For many years graduate programs in health administration have operated under the assumption that, in addition to academic study, cooperative education experience is a vital part of students' education. The academic study component was designed to introduce students to theories and skills relative to administration. This cooperative education component was designed to provide students with an opportunity to test theories in the "real world," in addition to obtaining concepts and skills not taught in the classroom setting. The purpose of this study was to conduct research to determine the effect a cooperative educational experience of approximately three months had on health administration students. Cooperative education experience as discussed here is "a period of time during which the student is given an opportunity to practice the various processes and responsibilities of a vocation under the supervision of a professional in the field."

Literature Review

Definitions of cooperative education are discussed by Mosser (1989) and Kerka (1989). According to Grossman (1988), cooperative education is highly unlikely to become the resource for a profound transformation of the work force that advocates of cooperative education suggested. Henry (1988) described a framework for administration and implementation of an internship program. Liberman (1986) described techniques used to initiate the program and some benefits the program has provided to the university,

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faculty and students. Sluce (1987) investigated the usefulness of identifying priorities and coordinating specific employer, teacher, and student objectives in placing specific types of undergraduate students in supervised work experience programs. Additionally, Ryder (1987) published a description of contemporary cooperative education that showed how programs, policies, and practices have developed and changed to fit today's educational and work environment. Sutton (1989) discussed concerns about cooperative education from an employer perspective, Ridout (1988) and Carter (1989) discussed roles of those involved in the effort, Glover (1987) and Raffield (1987) concentrated on evaluation, and Bjoernoe (1987) discussed cooperative program in other countries. From a how-to-do it perspective, Lazarus (1986) described techniques of cooperative programs, Franchak (1986) provided information on how-to-do it in high technology occupational areas, and Koeppel (1986) provided a workbook to prepare students to participate in internship.

Method

Sample Selection

Subjects selected for this study were students attending a college or university in Los Angeles, California. Three groups of students were selected: one undergraduate group (Group 1) and two graduate groups (Group 2 and 3). Group 1 and 2 were selected and performed their cooperative experience in the first year of the study. Group 3 subjects were selected and performed their experiences in the followings year. All students were placed in health administration settings.

Group 1 comprised ten students all of whom were undergraduate minority students with no prior health related work experience. There were five males and five females ranging in ages from 19 to 28 years. All students' cooperative work experiences were in hospitals. These enrolled students were the result of a special university's outreach program to attract and retain minority students in health careers. The purpose of the program was to provide a new opportunity for minority students to learn about various health careers and to function as a health care provider.

Group 2 and 3 were graduate students majoring in health services administration at the School of Public Administration, University of Southern California. A cooperative (field work) experience is recommended for all health administration students, especially those with no or little professional health administration related experience. Those selecting to participate in a cooperative education program generally had completed two semesters of course work.

Group 2 comprised of fifteen students ten of whom were males. They ranged in ages from 22 years to 46 years. Eleven were placed in hospital with the remaining four placed in health planning agencies. Six of these fifteen students were minorities.

Group 3 comprised fifteen students of whom five had prior health related work experience. There were five males and ten females ranging in ages from 21 years to 48 years. Twelve of these fifteen students were placed in hospitals with the remaining three placed in health planning agencies. Four of these fifteen were minority students.

Hypotheses and Questions

The following null hypotheses were examined during this study;

1. There will be no significant change in the attitudes of students toward a health administration career as measured by a comparison of pretest and posttest scores on the attitude questionnaire.
2. There will be no significant change in the attitude of the subjects toward a health administration career as measured by comparison of pretest and posttest scores on the semantic differential instrument.

Questions to be answered were:

1. In what direction will there be a change in the mean for the following instruments: a) attitude questionnaire and b) semantic differential.
2. Which of the variables (work, age, ethnicity) will show a significant difference between pretest and posttest scores on the attitude measuring instrument.

Research Procedures

Pretest questionnaires were mailed or administered to each subject in Groups 1, 2, and 3. After administration of the pretest, each student was placed in a health-related agency under the supervision of a professional health administrator for a minimum of 11 weeks. At the end of the experience, a posttest was either 1) mailed to the student with instruction to complete the questionnaire and return it or 2) the questionnaire was directly administered to each student. The posttest was exactly the same questionnaire as that used for the pretest.

Data Gathering Procedure

Data for analysis of this research were gathered through two instruments: an attitude questionnaire and a semantic differential questionnaire. The attitude questionnaire was developed for this research to measure the attitude of students concerning how they felt about themselves and how they felt about becoming health professionals. This instrument was a Likert-type summated rating scale that contained 20 questions to be rated on a scale from 1 to 5, ranging from 5 points for a response of "strongly agree" to 1 point for "strongly disagree." The objective of attitude questionnaire was to measure significant changes in attitudes of the subjects toward a health administration career.

According to Isaac (1972), the semantic differential instrument is a method for measuring the meaning of concept. In practice it has two applications: to measure objectively the semantic properties of words and concepts in a tridimensional semantic space, and, more commonly and simply, as an attitude scale, restricting its focus to the affective domain or the evaluative dimensions.

The semantic differential instrument used in this research consisted of five concepts: hospital, cooperative education experience, administrator, health career, and the student's skills of administration. Respondents indicated their feelings toward these concepts by marking the scale position that most nearly represented their feelings about each concept with respect to the polar adjectives. Ranking for each position ranged from 7 points for the most positive adjective down to 1 point for the most negative adjective. There were

12 pairs of adjectives for each concept, resulting in a total of 60 responses for the questionnaire.

Test for significance

To answer the null hypotheses and questions, the t test was used to determine the significance of difference between the pretest and posttest scores. Isaac (1972) indicated that the t test may be used to determine a significant difference between two sample means and is particularly appropriate for small samples. An alpha of .05 was established as the level of confidence.

Results

Data in Table 1 shows the direction of change in the means. A positive average difference in the mean indicates the scores on the posttest had a larger numerical value than the scores on the pretest. A negative average difference in mean indicates that scores on the posttest had a smaller numerical value than scores on the pretest.

Scores on the attitude questionnaire, as shown in Table 1, indicates significant differences between the pretest and posttest on several variables. The t scores of subject with no work experience were not significant at the .05 level. However, t scores with work experience were significant at the .05 level, whereas those of subjects 27 years old or less did not show any significant change. The attitudes of the nonminority subjects as measured by this instrument differed significantly while those of the minority subjects did not.

Analysis of the data revealed the following major results:

1. There was no significant change between pretest and posttest scores on the attitude questionnaire for any of the three subject groups.
2. Subjects in Group 1 consistently showed greater (though nonsignificant) change in the negative direction on the attitudinal questions than did subjects in Groups 2 and 3.
3. Subjects in Group 3 consistently showed greater (though nonsignificant) changes in the positive direction on the attitudinal questions than did subjects in Group 1 and 2.

4. Subjects in Group 2 consistently showed fewer changes in direction of the attitudinal questions than did subjects in Group 1 and 3.
5. Subjects in Group 2 showed significant positively directed changes on the attitudinal questions from the semantic differential scales on the concept "my skills of administration."
6. Subjects in Group 1 showed more negatively directed changes on the attitudinal questionnaire for the semantic differential scales than did Group 2. There were no negatively directed changes for Group 3.
7. Subjects in Group 1 and 2 showed negatively directed changes for the concepts "administrator" and "health careers" as measured by the semantic differential instrument.
8. Subjects in Group 1, 2, and 3 showed no significant difference in the manner in which they responded to questions on both instruments when a comparison was made between groups and within each group.
9. Significant positively directed changes occurred on the variables "work," age," and "ethnicity" in the attitude questionnaire.
10. No one variable (work, sex, age, ethnicity) showed consistently significant change on either questionnaire.

Discussion

The interest of this study centered on the effects of the cooperative education program on health administration students. The objective was to determine whether the student felt more positive toward a health administration career after participating in the program compared to his/her feeling before participating in the cooperative education experience. Attitude questionnaires were used to test for significant change through use of a pretest and posttest with the intervening experience. The semantic differential instrument used to measure the change in attitude toward the concept "my skills of administration" revealed a significant change in Group 3. This result may be interpreted as indicating that the significant change in attitudes of the subjects toward their skills of administration resulted from their cooperative education experience. These data may be viewed as supporting evidence that the students in Group 3 felt more positive toward a health administration career in relation to their skills of administration as a result of the cooperative education experience.

The majority of the results indicated no significant change in attitude. There may be several reasons for this. First, students were highly motivated before the experience. In answering the pretest attitude questionnaire, the majority of replies were extremely high. On a response gradation from very low to very high, few responses were neutral or below neutral. The majority of responses were in the high category with very high responses. Consequently, there was not much room for significant improvement for the posttest compared to the pretest. The result being no significant change. Second, the length of the experience might have been too brief. The students might have required more time for adequately internalizing the experience, and a longer experience might have given them enough time to obtain the necessary insights. Third, the potential for numbers of variables to be used in researching the effect of an experience is great. Variables not selected for measurement might have been at least of equal importance. The students' expectations might have been unrealistically high. As a result, the posttest score was higher than the pretest, but not high enough to indicate significance. For a situation as this, a realistic pretest score compared with a realistic posttest score might have shown significance. Finally, the quality of the experience might not have been at the desired level. The insufficient quality level might have caused the students to lose motivation and interest in participating intellectually. Physical involvement, such as helping supervisors in administrative tasks requiring physical activities, might have resulted in an increased positive attitude toward a health administration career.

The positive or negative sign for the "average difference in means" indicated the direction of change for the posttest. For example, under the variable "work," posttest scores of students with no experience was lower than those of their pretests, therefore a negatively directed mean. Posttest scores of students with experience was higher than their pretest scores to produce a positively directed mean.

Among all students who participated in the study, some had benefited significantly because of their cooperative education experience. These were students who had previously experience, were over the age of 27 years, and were nonminority. Several explanations could account for this. First, students

who had worked might have had more experience on job sites and knew more positive and negative possibilities that could transpire during the experience. Their expectations might not have been as unrealistically high as those with no work experience. Second, students who were over 27 years old might have been more mature and more realistic in their attitudes. Finally, nonminorities might have had significant change because they were generally older and had previous work experiences. Most minority students were under 27 years and had no work experience as a professional or semi-professional. Also, significant attitude change might not have occurred for minorities because of lack of positive reinforcements by fellow employees. Most organizations in which students were placed had predominantly nonminority employees.

Data from this study suggests the need for continual in-depth research on the topic. Future research should consider the use of a stronger research design with subjects doing a longer period of on-the-job experience. This research is important for the training of health managers because it provides information necessary for planning academic curricula and cooperative education experiences. It will also provide information necessary for policy making and evaluation of these programs.

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TABLE 1

Summary of Significant Variables:
Attitude Questionnaire

Variable	n	Average Difference in Means	SD	t Score	Significant at .05
Work					
No Experience	32	-.109	.342	-1.809	No
Experience	9	.394	.275	4.301	Yes
Age					
Under 24	20	-.160	.362	-1.977	No
24 - 27	10	-.015	.306	.155	No
Over 27	11	.309	.334	3.066	Yes
Ethnicity					
Minority	21	-.148	.388	-1.746	No
Nonminority	20	.157	.329	2.144	Yes